IN THE CLAIMS:

A complete set of claims is provided below.

Please cancel Claims 1-30.

Please add new claim 31-38 as indicated.

1.-30. (Canceled)

31. (New) In a signal processor for processing at least two measured signals M_1 and M_2, where said signal M_1 comprises a combination of a signal portion S_1 and a signal portion N_1, and where said signal M_2 comprises a combination of a signal portion S_2 and a signal portion N_2, where S_1 is approximately proportional to S_2 and where N_1 is approximately proportional to N_2, a method comprising:

determining a value for a coefficient c, such that an error value e, given by the relation $e = S_1 - (cM_1 - M_2)$ is at least partially reduced; and

using said coefficient c to remove at least some of the signal portion N_1 from the measured signal M_1 and thereby producing an approximation A_1 to said signal S_1, where $A_1 = cM_1 - M_2$.

32. (New) The method of Claim 31, where A_1, M_1 and M_2 are frequency domain signals.

33. (New) The method of Claim 31, further comprising displaying the resulting clean signal on a display.

34. (New) The method of Claim 31, wherein said first and second signals are physiological signals, further comprising the step of processing said clean signal to determine a physiological parameter from said first and second measured signals.

35. (New) The method of Claim 34, wherein said physiological parameter is arterial oxygen saturation.

36. (New) The method of Claim 34, wherein said physiological parameter is an ECG signal.

37. (New) The method of Claim 32, wherein the first portion of said measured signals is indicative of a heart plethysmograph, further comprising the step of calculating the pulse rate.